

Appl. No. 09/890,685
Resp. Dated March 11, 2004
Reply to Office Action of February 12, 2004
Atty. Docket No. 521.1008

REMARKS

Claims 8-17 are pending in the present application. Claims 8 and 10-16 were rejected under 35 U.S.C. §103 (a) as being unpatentable over European Patent No. EPO 0560696 in view of Chien et al., U.S. Patent No. 5,196,815. Claims 9 and 16-17 were rejected under 35 U.S.C. §103 (a) as being unpatentable over EPO 0560696 in view of Chien et al. as applied to claim 8, and further in view of Stieglitz, U.S. Patent No. 5,428,883.

Claims 8 and 16 have now been amended.

Rejection under 35 U.S.C. §103 (a) to claims 8 and 10-16

Claims 8 and 10-16 were rejected under 35 U.S.C. §103 (a) as being unpatentable over European Patent No. EPO 0560696 in view of Chien et al., U.S. Patent No. 5,196,815.

EPO 0560696 shows a circuit breaker having a rotary contact member 44 and a pair of u-shaped stationary contacts 24, 25 disposed in receptacles within an interrupter chamber housing 10. See Fig. 1.

Chien et al. describes a miniature circuit breaker having a fixed contact structure placed close to, or embedded within second housing wall portion 22. The fixed contact structure in the form of a loop having leg portions 38 and 40. See Fig. 1 and Col. 4, lines 18-24.

Independent claim 8 of the present application has now been amended to recite a circuit breaker including “a busbar injection molded into the outside wall and in contact with the outside wall over a large surface of the busbar so as to enhance heat transfer from the busbar to the outside wall”. Support for the amendment to claim 8 may be found, for example, at paragraphs [0005] and [0007] of the specification. It is respectfully submitted that no new matter has been

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added.

It is respectfully submitted that neither EPO 0560696 nor Chien et al. teach or suggest a busbar injected molded into the outside wall and in contact with the outside wall over a large surface of the busbar so as to enhance heat transfer from the busbar to the outside wall, as recited in amended claim 8. As indicated by the Examiner (see Office Action at page 3, lines 10-11), EPO 0560696 does not disclose an injection molded busbar. Nor does Chien et al. teach or suggest an injection molded busbar features of claim 8. Moreover, neither of these references evince any recognition of the busbar being injection molded so as to contact the outside wall of the housing over a large surface of the busbar so as to enhance heat transfer. EPO 0560696 does not show such contact over a large surface of the busbar, but in fact shows a gap between the busbar and the outside wall (see EPO 0560696, Fig. 1).

The above notwithstanding, it is respectfully submitted that one of skill in the art would have had no reason to look to Chien et al. since in the EPO 0560696 device the busbar is apparently satisfactorily positioned and retained in the housing. Neither EPO 0560696 nor Chien et al. evidences a recognition of a primary problem addressed by the present invention--dissipation of heat generated by the busbars. See specification at paragraph [0003]. Claim 8 as now amended recites enhanced heat transfer from the busbar to the outside wall.

For at least the reasons stated above, withdrawal of the rejection of claims 8 and 10-16 under 35 U.S.C. §103 (a) based on EPO 0560696 in view of Chien et al. is hereby respectfully requested.

Rejection under 35 U.S.C. §103 (a) to claims 9 and 16-17

Claims 9 and 16-17 were rejected under 35 U.S.C. §103 (a) as being unpatentable over

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EPO 0560696 in view of Chien et al. as applied to claim 8 above, and further in view of Stieglitz, U.S. Patent No. 5,428,883.

Stieglitz describes a process for manufacturing an electromagnetically actuated fuel-injection valve. At least a part of a valve sleeve 8 and a complete housing cover 13 are surrounded by a plastic extrusion coat 58. Also premolded at the same time on the extrusion coat 58 is an electrical power plug 18, through which pass electrical contacts (apparently contact tags 17--See col. 2, line 66) coupled to a solenoid 2. See col. 4, lines 55-60, and Fig. 1.

Dependent claim 9 of the present application recites a circuit breaker "wherein the busbar is imbedded into the outside wall by an injection molding process using the plastic material." Independent claim 16, as amended, recites a method for manufacturing a circuit breaker, the method including "injecting the plastic material into the mold so as to surround a large surface area of the busbar so as to enhance heat transfer from the busbar to the interrupter chamber housing." As noted by the Examiner, EPO 0560696 does not teach the stationary contact assembly being injection molded within the outside wall. See Office Action , page 3, lines 18-19. Nor does Chien et al. teach or suggest this feature. It is respectfully submitted that Stieglitz, to the extent it is analogous art, also does not teach a busbar being imbedded by injection molding, as recited in claim 9. Stieglitz nowhere teaches how contact tag 17 is placed in electrical power plug 18. Indeed, contact tag 17 could be inserted through an orifice in power plug 18 after the molding of power plug 18.

The Examiner has stated that applicant has not claimed any specific method steps not necessitated by the product structure. See Office Action at page 5, lines 12-13. On the contrary, it is respectfully submitted that there are other ways of disposing the busbar in the interrupter housing wall; injection molding as recited in claims 9 and 16 is not required by the structure of

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the product. It is respectfully submitted therefore that applicants' recitation of "injection molding" is a patentable distinction over Stieglitz, as well as EPO 0560696 and Chien et al.

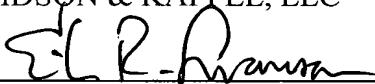
For at least the reasons stated above, withdrawal of the rejection of claims 9 and 16-17 under 35 U.S.C. §103 (a) based on EPO 0560696 in view of Chien et al. as applied to claim 8 above, and further in view of Stieglitz, is hereby respectfully requested.

CONCLUSION

It is respectfully submitted that the application is now in condition for allowance.

Respectfully submitted,

DAVIDSON, DAVIDSON & KAPPEL, LLC

By: 
Erik R. Swanson
Reg. No. 40,833

Davidson, Davidson & Kappel, LLC
485 Seventh Avenue, 14th Floor
New York, New York 10018
(212) 736-1940